REMARKS

The non-final Office Action mailed September 3, 2009 (hereinafter, "Office Action") has been reviewed and the Examiner's comments considered. Claims 1-36 are pending in this application. Claims 2, 3, 5, and 6 have been amended to correct typographical errors. Applicants submit that no new matter is introduced.

Objection to the Drawings

The drawings are objected to under 37 C.F.R. § 1.83(a). The Office Action states that "[t]he drawings must show every feature of the invention specified in the claims. Therefore, the 'envelope' mentioned in **claim 8** must be shown or the feature(s) canceled from the claim(s)." (Office Action, p. 2, emphasis in original).

Applicants note that the "envelope" recited in claim 8 is not a specific structure, but rather a reference term akin to an axis. An axis is not a specific structure, but rather a reference to an imaginary line through a body or figure. Similarly, an envelope is an imaginary reference curve or surface. In the same way that an imaginary reference axis may be determined by looking at a figure, an envelope may also be determined. The drawings illustrate that each of the loops lies within an envelope (i.e., imaginary reference curve or surface) that is transverse to the axis.

Accordingly, Applicants respectfully request that the objection under 37 C.F.R. § 1.83(a) with respect to the drawings be withdrawn.

Claim Objections

The claims are objected to because of informalities. Specifically, claims 2 and 3 recite further compromises" rather than "further comprises." These informalities have been corrected in the claim amendments. Accordingly, Applicants respectfully request that the objection with respect to the claims be withdrawn.

Claim Rejections – 35 U.S.C. § 112

Claims 4 and 6-10 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 4, the Office Action alleges that "canceling remainder" is unclear. The instant application relates to MRI compatible implants where "each lobe 'cancels' the other lobe" or groups of nodes, in the aggregate, cancel other groups of nodes so that there are no eddy currents. (*See* paragraphs [0027], [0034], [0047], and [0072]).

As paragraph [0027] states, "[i]n an embodiment where all lobes have equal area, there should be an even number of such nodes. However, one can envisage embodiments in which a smaller number of large area nodes are arranged with a larger number of cancelling small area nodes, so as to deliver an eddy current cancellation effect, in aggregate. Reverting to our image of paper with one side green and the other red, the B_1 field should "see" the same aggregate total area of red paper as green paper." (Instant application, paragraph [0027], emphasis added).

Claim 4 relates to an implant, in which "each of said loops has additional lobes and additional cross-over points between said additional lobes, with the areas bounded by the lobes being such that, in aggregate, the area bounded by one set of lobes equals the area bounded by a cancelling remainder of the lobes." There are two sets of lobes, "one set" and the "cancelling remainder." The "canceling remainder" is the "remainder" lobes that are not in the "one set" that cancel the lobes in the one set.

Applicants assert that, in view of the specification as originally filed, the "cancelling remainder" is clear to a person of ordinary skill in the art. Accordingly, Applicants respectfully request that the 35 U.S.C. § 112 rejection with respect to claim 4 be withdrawn.

Regarding claim 6, the Office Action states that there is insufficient antecedent basis for "said axis" in line 2 of claim 6. Applicants have amended claim 6 to recite "an axis." Accordingly,

Applicants respectfully request that the 35 U.S.C. § 112 rejection with respect to claim 6 be withdrawn.

Regarding claim 8, the Office Action states that it is "unclear how an envelope fits into this invention." As discussed above, the "envelope" recited in claim 8 is not a specific structure, but rather a reference term akin to an axis. The drawings illustrate that the loops lie within an envelope, (i.e., an imaginary reference curve or surface) that is transverse to the axis. Thus, Applicants assert that the "envelope" is clear and understood by a person of ordinary skill in the art, and respectfully request that the 35 U.S.C. § 112 rejection with respect to claim 6 be withdrawn.

Claim Rejections - 35 U.S.C. § 102

Claims 1-5, 11-16, 18-21, 23, 25-29, and 32-36 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over USPN 6,712,844 to Pacetti (hereinafter, "Pacetti"). Claims 1 and 6-10 stand rejected under 35 U.S.C. § 102(a) as being unpatentable over WO-03015662. The Office Action uses US 2004/0249440 to Bucker et al. (hereinafter, "Bucker") as a translation of WO-03015662. Accordingly, citations herein to Bucker are directed to US 2004/0249440. Applicants respectfully traverse these rejections.

Independent claims 1 and 35, relate to implants that are MRI compatible and prevent the flow of electricity by cancelation between multiple electrically-conductive closed loops.

Claim 1 recites "[a]n implant comprising: electrically-conductive closed loops forming an apertured wall of the implant with an interior volume, each of said loops being formed from loop portions providing electrically-conductive current pathways within which eddy currents are liable to be induced when subjected to a time-dependent external magnetic field, each of said loops including a first current pathway and a second current pathway wherein said first current pathway and said second current pathway are arranged such that, regardless of the direction of said external magnetic field, the direction of the eddy current that would be induced by said field in said second current pathway is the reverse of the direction of the eddy current that would simultaneously be induced by

said field in said first current pathway, thereby to prevent flow of eddy currents in each of said loops."

Claim 35 recites "[a]n implant tube comprising: an electrical conductor, said electrical conductor having a plurality of closed loops electrically insulated from each other, each of said closed loops having a periphery of a string of equal area lobes that are within said closed loop, and every one of said lobes having a counterpart lobe located diametrically opposite on the implant tube."

Pacetti

The Office Action alleges that Pacetti teaches an MRI compatible stent that provides "electrically-conductive current pathways (Column 6, lines 5-8) within which eddy currents are liable to be induced when subjected to a time-dependent external magnetic field (Column 6, lines 27-29), each of said loops including a first current pathway and a second current pathway (Annotated Figure 5) wherein said first current pathway and said second current pathway are arranged such that, regardless of the direction of said external magnetic field, the direction of the eddy current that would be induced by said field in said second current pathway is the reverse of the direction of the eddy current that would simultaneously be induced by said field in said first current pathway, thereby to prevent flow of eddy currents in each of said loops (Annotated Figure 5; the directions of the current flowing will be opposite, due to nonconductive connectors present in the loop portion (Column 7, lines 4-7 and 12-14))." (Office Action, p. 5).

However, the Office Action cites to a "typical metal stent" (Pacetti, col. 5:57) that is "expected to be the most problematic for MRI" (Pacetti, col. 6:33-34, emphasis added) to provide teaching of "electrically conductive pathways within which eddy currents are liable to be induced."

Contrary to the assertion of the Office Action, the point of Pacetti is to eliminate these electrically conductive paths in a typical metal stent. Pacetti teaches that "[t]he purpose of the discontinuities is to eliminate a complete electrically conducting circuit through which an electrical current could travel if the current were induced in the stent by an MRI procedure. . . . In the

preferred embodiment . . . the discontinuities 52 are located to eliminate any complete electrically conducting circuits in both the rings 40 and the cells 44." (Pacetti, col. 6:61-col. 7:2).

FIG. 5, reproduced below, in Pacetti shows that "[t]he discontinuities 52 are located to eliminate any complete electrically conducting circuits in both the rings 40 and the cells 44." (Pacetti, col. 6:65-col. 7:2).

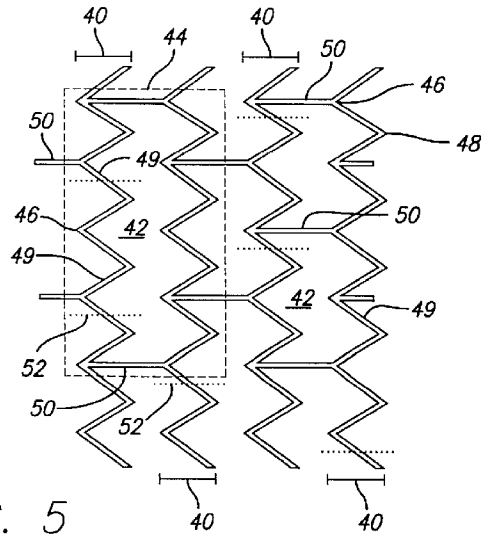

FIG. 5

As can be seen in FIG. 5, the discontinuities 52 eliminate the electrically conductive paths that are present in a typical metal stent. In Pacetti, current cannot flow because of the discontinuities, not due to electrically-conductive closed loops that cancel. (As can be seen in FIG. 5 aperture 42 actually includes two discontinuities 52.) Accordingly, Pacetti fails to teach electrically-conductive closed loops that cancel each other to prevent flow of eddy currents in each of said loops, as claimed. Applicants respectfully submit that the statement in the Office Action that "the directions of the current flowing will be opposite, due to nonconductive connectors present in the loop portion" is incorrect because in Pacetti there are no conductive loops. The loops are eliminated by the discontinuities.

With respect to claim 35, the Office Action alleges that "it is inherent in the construction of Pacetti's implant that each lobe must have a counterpart lobe located diametrically opposite it on the implant tube. If this was not the case, the current pathways created with the implant [when] placed under a magnetic field would not cancel each other out, and the implant would not prevent the Farady Cage effect." (Office Action, pp. 10-11.)

However, Applicants submit that the claimed structure is not inherent in Pacetti, because the Pacetti stent acts to eliminate the electrically conductive paths that are present in a typical metal stent through the use of discontinuities. In contradistinction to Pacetti, the present application relates to implants that are MRI compatible and prevent the flow of electricity by cancelation between multiple electrically-conductive closed loops. Pacetti fails to teach "closed loops electrically insulated from each other [with] a counterpart lobe located diametrically opposite on the implant tube" as recited in claim 35.

Accordingly, in view of the above, Pacetti fails to teach or suggest all of the limitations in independent claims 1 and 35. Thus, independent claims 1 and 35, and claims 2-5, 11-16, 18-21, 23, 25-29, 32-34 and 36 depending therefrom, are patentable over Pacetti and Applicants requests favorable reconsideration and withdrawal of this rejection under 35 U.S.C. § 102.

Bucker

The Office Action alleges that Bucker teaches "electrically-conductive current pathways ([0006]; a material is electrically conductive) within which eddy currents are liable to be induced when subjected to a time-dependent external magnetic field ([0003]), each of said loops including a first current pathway and a second current pathway (Annotated Figure 2d) wherein said first current pathway and said second current pathway are arranged such that, regardless of the direction of said external magnetic field, the direction of the eddy current that would be induced by said field in said second current pathway is the reverse of the direction of the eddy current that would simultaneously be induced by said field in said first current pathway, thereby to prevent flow of eddy currents in each of said loops ([0017])." (Office Action, p. 12).

The Office Action admits, however, that in Bucker "because the endoprosthesis does not form a closed circuit, current will not flow." (Office Action, p. 12). This is also stated in Bucker at paragraph [0019]. Thus, Bucker fails to teach at least "electrically-conductive closed loops" that cancel each other to "prevent flow of eddy currents in each of said loops."

Accordingly, in view of the above, Bucker fails to teach or suggest all of the limitations in independent claim 1. Thus, independent claim 1 and claims 2-5, 11-16, 18-21, 23, 25-29, 32-34 depending therefrom, are patentable over Pacetti and Applicants requests favorable reconsideration and withdrawal of this rejection under 35 U.S.C. § 102.

Claim Rejections - 35 U.S.C. § 103

Claim 17 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pacetti in view of USPN 5,599,311 to Raulerson. Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pacetti in view of USPN 6,176,875 to Lenker et al. Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Pacetti in view of US Pub. 2004/0122506 to Shanley et al. Claims 30-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pacetti in view of USPN 5,733326 to Tomonto et al. Applicants respectfully traverse these rejections.

Without conceding the propriety of the asserted combinations or the allegations in the Office Action with respect to the allegedly disclosed subject matter, Applicants submit that each of claims 17, 22, 24, and 30-31 depends from patentable independent claim 1 and is therefore patentable for at least this reason. Accordingly, Applicants request favorable reconsideration and withdrawal of the rejections under 35 U.S.C. § 103.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is

determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

It is noted that the remarks herein do not constitute, nor are they intended to be, an exhaustive enumeration of the distinctions between the cited references and the claimed invention. Rather, the distinctions identified and discussed herein are presented solely by way of example. Consistent with the foregoing, the discussion herein should not be construed to prejudice or foreclose future consideration by Applicants of additional or alternative distinctions between the claims of the present application and the references cited by the Examiner and/or the merits of additional or alternative arguments.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. **50-2191** referencing docket no. 101671.0058P from which the undersigned is authorized to draw.

Dated: December 3, 2009

Respectfully submitted,

Electronic signature: /Todd W. Wight/
Todd W. Wight
Registration No.: 45,218
RUTAN & TUCKER
611 Anton Blvd, Suite 1400
Costa Mesa, California 92626
(714) 641-5100
Patents@Rutan.com